## Supplementary Figures



Fig. S1 Photocurrent action spectra of (a)  $1D-WO_3/FTO$  and (b)  $BiVO_4/FTO$  electrodes measured in 1 mM  $Na_2SO_3$  aqueous solution (pH7 phosphate buffered), applied bias 0.7 V vs. Ag/AgCl.



Fig. S2 TEM imags of 1D-WO<sub>3</sub> prepared using  $((C_4H_9)_4N)_4W_{10}O_{39}$  preursor.



Fig. S3 SEM Images of (a) 1D-WO $_3$ /FTO and (b) BiVO $_4$ /FTO electrodes.



**Fig. S4** Linear sweep voltammograms of Co-Pi/BiVO<sub>4</sub>/1D-WO<sub>3</sub>/FTO electrodes (blue) and BiVO<sub>4</sub>/1D-WO<sub>3</sub>/FTO electrodes (red) in 0.5M Na<sub>2</sub>SO<sub>4</sub> electrolytes measured (scan rate, 25 mV/s) under (AM1.5  $(100 \text{ mW/cm}^2)$  light (a) and dark (b).



**Fig. S5** The photocurrent vs. time (chronoamperometry) plots of Co-Pi/1D-WO<sub>3</sub>/BiVO<sub>4</sub>/FTO photoanode (a) till 24 h and (b) extended durability measurements till 48 h, measured at an applied bias of 0.63 V *vs*. Pt counter electrode in 0.5M Na<sub>2</sub>SO<sub>4.</sub> The measurements were performed under continuous 1 sun, AM 1.5 simulated solar irradiation for 24 h.